CURATORIAL GUIDELINES FOR COLLECTORS OF RETAINED NATURAL HISTORY SPECIMENS

at

Rock Creek Park

May 2009

Introduction

A museum collection is generated and maintained to document and support a park's resource management, research and interpretive programs. The NPS museum program objectives include the commitment to collect, document and preserve objects, specimens, samples and associated records as defined within a park's approved scope of collection statement (SOCS). The collection is a nonrenewable resource.

In the National Park Service (NPS), the Superintendent is responsible for the accountability, preservation, protection and use of the site's museum collections. The Superintendent ensures that all research projects generating museum specimens include funding to ensure that the cataloging and the initial preservation and storage requirements are accomplished. The Superintendent recommends or approves all planning documents that are related to the proper management of the museum collections. The day-to-day care for a park's collection is delegated by the Superintendent to the park curatorial staff. Park curatorial staff may also undertake the responsibility of researching and interpreting the collection. **The curatorial staff must be involved in reviewing specimen collecting activities, including permit requests, to insure that NPS curatorial requirements are met.**

Scope of Requirements

The curatorial requirements outlined in this document apply to both NPS and non-NPS researchers if the specimens are to be retained in a collection. Park-generated research projects and specimens collected by park staff are not exempt from these requirements.

Authority

The policies and procedures stated in this document are authorized by the following NPS policies and guidelines: NPS *Management Policies*, Director's Order #24 (NPS Museum Collection Management), Director's Order #77 (Natural Resource Management Guideline), Director's Order #77 (Inventory and Monitoring Program), NPS Museum Handbook, Parts I-III and Automated National Catalog System (ANCS+) User's Manual.

Complete text of NPS policies is available at www.nps.gov/policy. Relevant excerpts for natural history collections are presented below.

The NPS *Management Policies* states:

Natural resource collections include nonliving and living specimens and associated field records. If placed in exhibits or retained in permanent collections, nonliving specimens and their associated field records will be cataloged into a park's museum collection. (4:4)

Natural resource collections are managed according to NPS *Management Policies*, Museum Objects and Library Materials (5:9-11); Security and Protective Measures (5:13-14); and Preservation of Data and Collections and Protection of Research Potential (5:3-4).

For **NPS projects**, Director's Order #24 guides project-derived collections curation needs. Director's Order #24 (NPS Museum Collection Management) *Section 4.3.16 Project-generated Collections* states that Superintendent's must:

> Require project budgets to include funding for the basic management of collections that are project-generated. Collections management includes cataloging; labeling; conservation examination and treatment (including specimen preparation); initial storage of objects and specimens; and organization and storage of project documentation, including appraisal, arrangement, description, finding aid production and appropriate archival housing.
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> • Before starting, permitting or contracting a project, specify in writing in the task directive, proposal, agreement, permit or contract, the parties responsible, the designated NPS or non-NPS repository, the collections management tasks and a time schedule for completion.
>
> • Fund subsequent ongoing maintenance costs of collections management from the operating base of the responsible park, center or other repository.
>
> • If project-generated collections cannot be accommodated in available storage space, and new storage space construction is necessary, program to construct new space to accommodate the expanded collection. If interim storage is needed, specify in the project task directive the location of that storage, and state that it must meet NPS standards. Identify the funding source for interim storage.

For **NPS and non-NPS research projects** that result in a natural history collection, Director's Order #77 provides guidance. Director's Order #77 (Natural Resource Management Guideline) states:

> A critical element in the preservation of permanently retained natural resource collections is ensuring that early and continuing consideration of curatorial concerns is an integral part of the park's scientific research planning process. Many park research projects produce specimens that may have inherent long-term preservation value. The responsibility for the curation of such specimens and associated data must be determined by a park's scientific and curatorial staff prior to starting a research project and be written into the conditions of each research proposal, cooperative agreement, contract or collecting permit. Planning includes determining provisions for field documentation and preparation of specimens, identifying the recipient NPS or non-NPS repository for the specimens and ensuring that each project funds the cataloging and initial preservation and storage costs.

For non-NPS studies, part of the requirements of a permit derived from NPS scientific research and collecting permits process may include requirements that the permittees provide for parks, within agreed-upon timeframes, copies of appropriate field notes, cataloging and other data; information about the data, progress reports; interim and final reports; and publications derived from the permitted activities. Please contact Rock Creek Park's curator at (202)-895-6011 for permit-specific guidance and instructions.

Definitions

Natural resource museum collection: A collection comprised of permanently retained specimens and samples taken from the living and nonliving components of the natural world and project documentation generated by the collecting and research activities. A specimen without its associated documentation has limited or no scientific value. The decision to permanently retain a specimen in a park's museum collection depends on the purpose of the collecting activity or the recommendations of the researcher/collector in consultation with park curatorial staff. General reference collections, voucher specimens, exhibit specimens and most research specimens are managed as part of a park's museum collection. Natural resource museum collections can include biological specimens, geological specimens, paleontological specimens and environmental samples.

Project Documentation: Data, records, reports and other related information generated as a result of research activities conducted within a park or on museum specimens collected in a park. Natural resource archives may contain field notes, daily journals, maps, drawings, photos and negatives, slides, videotapes, raw data sheets, remote sensing data, copies of contracts, correspondence, repository agreements, specialists' reports and analyses, reports and manuscripts, collection inventories, field catalogs, analytical study data, sound recordings, computer documentation and data, tabulations and lists, specimen preparation records, conservation treatment records and reports on all scientific samples lost through destructive analysis.

Ownership of Collections

All specimens collected for permanent retention, as well as their derivatives and byproducts, remain the property of the National Park Service. If you collect specimens that are to be permanently retained—regardless of where they are kept—those specimens must be accessioned and cataloged into the National Park Service's Automated National Catalog System (ANCS+), and must bear National Park Service (NPS) labels containing NPS accession and catalog numbers.

Designated Repositories

The museum collections from Rock Creek Park (ROCR) are located and exhibited at sites throughout the park including, but not limited to, the Nature Center, Old Stone House, and at the Museum Resources Center (MRCE) in Landover, Maryland. In general, the MRCE is the preferred repository for specimens collected from ROCR. Use of a single repository simplifies collection management and accountability of collections while enabling researchers to access more park specimens at a single location. The National Capital Region (NCR), including ROCR, has designated the MRCE as their primary repository for archaeological collections.

There are situations, however, when use of other repositories is appropriate, in furtherance of the

National Park Service mission to ensure access and preservation of museum collections. All such repositories must meet NPS standards for the preservation and protection of museum collections. **The proposed repository for specimens collected must be discussed with the Curator/Cultural Resource Specialist's office as part of the permit application process. Anticipated curation costs beyond cataloging (e.g. specimen preparation techniques and supplies, storage cabinet and supply purchases, conservation, etc.) must also be discussed at that time. See Attachment 1: Required Curation Materials and Supplies for more information.** The National Park Service reserves the right to mandate specific repositories for collections from park property.

Please note that the National Park Service does not loan specimens to individuals—institutional sponsorship is required. All loans of specimens to institutions (for cataloging, research, conservation, exhibit or storage purposes) must be accompanied by the required loan paperwork, approved by the park Superintendent or the Regional Curator at MRCE. The maximum time period for any loan is 10 years; extensions or renewals of loans can be granted.

BEFORE Collecting

Call the Curator/CR Specialist's office at (202) 895-6011 to obtain an accession number for the collection.

- Please have your permit number available.
- It is recommended that you contact the Curator/CR Specialist's office before traveling to the park. Museum staffing is limited and no one may be available to provide an accession number during your collecting trip unless advance notice has been provided. Accession numbers can be provided in advance via telephone.
- **Specimens may not leave the park until they are accessioned**.
- The park accession number must appear on all reports, field notes and correspondence relating to the collection, and on the label of each specimen collected.

DURING Collecting:

During collection, it is essential to gather complete information required for cataloging specimens. The Museum Catalog Worksheet-NH (Form 10-254D, excel spreadsheet) may be used during fieldwork for documenting pertinent data on-site, thus assuring that the collector has recorded all pertinent ANCS+-related data. Copies of Form 10-254D may be obtained from the Curator/CR Specialist's office.

Per Director's Order #77, the use of longitude/latitude or Universal Transverse Mercator Grid (UTM) coordinates is required in the natural resource specimen catalog record to integrate information into the Geographic Information System (GIS). These data bases allow for efficient and effective use of the collection information for park-related management programs, for determining gaps in research needs, and for helping resource managers make decisions and set priorities, for the following programs:

- Inventory and monitoring

- Environmental compliance
- Fire planning
- Development planning
- Wildlife management
- Vegetation management
- Environmental impact plans
- Resource management plans

AFTER collecting:

Call the Curator/CR Specialist's office and obtain a block of catalog numbers for the specimens that will be permanently retained. When you call, please have the following information ready:

- Your accession number.
- Dates collecting began and ended.
- Number of specimens collected (estimates are acceptable for large collections).
- The name of the institution and point of contact where specimens will be cataloged.

The Curator/CR Specialist will coordinate with you (or the individual responsible for cataloging the collection) and may provide:

- The export file to catalog your specimens, including field by field instructions. This file can be used for data entry with MS Excel.
- A worksheet for cataloguing specimens if necessary
- Sample catalog records (if needed).
- NPS specimen labels and instructions for their completion.
- An NPS Outgoing Loan Agreement form, to be signed by the institutional representative responsible for the loan. (All specimens, as well as their derivatives and byproducts, remain the property of the United States Government).

Integrated Pest Management

The National Park Service does not fumigate museum specimens as a preventive measure. Pests are managed through isolation, monitoring, good housekeeping, eliminating food and beverages, excluding pests and other Integrated Pest Management practices. Do not use fumigants with NPS collections. If you have concerns or questions about individual specimens, please call the Museum Curator/Cultural Resource Specialist at (202) 895-6011.

Cataloging

Cataloging of NPS specimens must be done by using the export template in MS Excel. **Refer to the "Cataloging NPS Biological Specimens" handout for additional information on required fields and formats for cataloging NPS specimens.**

Any documentation including reports, field notes and maps must also be catalogued as part of the collection. Contact the Museum Curator/CR Specialist if there are any questions.

Cataloging of specimens to NPS standards is the responsibility of the collector. The cataloging process records the documentary information of the specimen and can serve as an index to additional sources of information. It is the primary property and location record of a natural resource specimen. This information is entered into the NPS Automated National Catalog System (ANCS+), making the information available for future accountability, inventory and research purposes. If this is a problem or if you have any questions, please contact the Curator/ CR Specialist at (202) 895-6011.

NOTE: SPECIMENS THAT ARE TO BE CONSUMED IN THE COURSE OF RESEARCH SHOULD NOT BE CATALOGED.

For standard cataloging procedures, refer to the NPS Museum Handbook, Part II, Chapters 3 and 4, Appendix H, and the ANCS+ User Manual. Electronic copies of these documents are available at www.cr.nps.gov/museum/publications/index.htm

Specimen Labels

As stated in Director's Order #77 (Natural Resources Management Guideline), NPS specimen labels:

- Become a permanent record and identify the specimen as belonging to the NPS irrespective of where it is being stored or used;
- Provide data that are essential to the identification of the specimen and are required for the proper cataloging of the specimen; and
- Must be completed by the collector before cataloging.

Specimen labels are provided by the NPS to park and non-NPS researchers who collect specimens as part of an approved research project. For guidance on standard labeling procedures refer to the NPS Museum Handbook, Part II, Appendix H.

Labels must be printed on archival quality (acid-free) paper or Tyvek using permanent ink. All labels MUST contain the appropriate park accession and catalog numbers in permanent ink, in this format:

Accession Number:
ROCR-XXXX for Rock Creek Park
Catalog Number:
ROCR XXXX for Rock Creek Park

Note that the hyphen is necessary to distinguish the accession number from the catalog number. Do not use hyphens in the catalog number.

- The accession number MUST appear on all reports, correspondence and original field records pertaining to the collection.
- Catalog numbers should be cited in your final report when referencing individual specimens.

AFTER Cataloging

Within one year of the final date of collecting (or upon a time mutually agreed upon between Park and researcher), you must submit:

- Any specimens that are to be permanently retained, along with your labels and project documentation, to the repository in which they are to be curated. If the approved repository is not the ROCR, you must provide the Curator/CR Specialist's office with confirmation that specimens and associated documentation have been deposited.
- An electronic copy of your catalog records (in the appropriate export file) to the Curator/CR Specialist's office.
- Copies of all of your field records (notes, maps, recordings, etc.) to the Curator/CR Specialist's office. Please copy notes, maps and other written or printed matter onto acid-free paper. This requirement is a safeguard, in case original materials are accidentally destroyed or lost in the future.

If you find that you will have trouble meeting this deadline, please contact the Curator/CR Specialist or the Permit Coordinator for ROCR to make other arrangements.

Material Transfer Agreements

All specimens (including anything derived from such material) removed from ROCR and any site within ROCR remains federal property. If you wish to send specimens (or their progeny or derivatives) to a colleague outside your own laboratory for further analysis, your colleague must complete a Material Transfer Agreement with the appropriate park and may also be required to apply for a Scientific Research and Collecting Permit. **No materials can be transferred until the appropriate paperwork has been completed.** For assistance with specimen transfers, please contact the ROCR Research Permit Office.

Contact Information

Please contact the Curator/CR Specialist's office at any time during this process with any questions that may arise. We are here to help you comply with the terms of your permit and to make compliance as easy as possible, under current regulations.

Simone Monteleone Moffett
Cultural Resources Specialist
Rock Creek Park
3545 Williamsburg Lane, N.W.
Washington, DC 20008-1207
202-895-6011

The Research Permit Coordinator can answer any questions pertaining to the specific permit process, application, and requirements.

Bill Yeaman

Research Permit Coordinator
Rock Creek Park
3545 Williamsburg Lane, N.W.
Washington, DC 20008-1207
202-895-6074

Attachment 1: Required Curation Materials and Supplies

General Supplies

Acid-free paper—a 25% rag paper with a pH of approximately 7.0; free of acid, lignin, alum and sulfur.
Calipers
Pencil—"H" or #2 hardness graphite lead pencil.
Permanent black ink—fade resistant, indelible ink. Acceptable inks are Higgins®, Black Magic® and Pelikan 17 Black. (Note: Sharpies® are not archival).
Pigma pen—permanent black ink pen.
Polyethylene Ziplock™ or similar bags—avoid bags developed for food storage and home use because of printing inks and dyes.
Tape measure, cloth—metric and SAE.

Safety Supplies

Neoprene gloves—heavier synthetic gloves for handling fluid preserved specimens as they are

resistant to alcohol and formaldehyde.
Nitrile gloves—synthetic rubber gloves for handling natural history specimens that may have been treated with poisonous chemicals.
Respirator—it is the collector's responsibility to be medically evaluated for respirator use, be fit tested, use appropriate cartridge filters for the activity and be trained in its proper use.

Archives (Project Documentation)

Archival file folders—acid-free, lignin-free, buffered folders, letter or legal size.
Archival map folders—large, heavy stock buffered folders.

- Do not use buffered folders for blueprints or photographs unless first placed inside a sleeve of unbuffered paper or Mylar® as a barrier.

Archival document storage box—made of buffered board and for use with documents placed inside archival file folders; letter or legal size.
Archival record storage box—buffered corrugated fiberboard box with separate telescoping lid used to store documents placed inside archival file folders, for projects with larger quantities of associated field records.
Archival photo enclosures

- All materials used to house photographic images must have passed the Photographic Activity Test (PAT).
- Polyethylene photo pages may be used—do not use yellowed polyethylene pages as they may be contaminated with damaging chemicals. Never use PVC photographic pages.
- Alkaline buffered paper enclosures may be used for black-and-white cellulose ester film.
- Use only unbuffered materials for color images (prints, negatives, transparencies and slides).
- Due to the humidity control issues, do not use Polyester (Mylar®) envelopes for photographs.

Entomology Specimens

Stainless steel pins for mounting insects
Insect pinning trays—constructed of 0.5'' thick cardboard and covered with acid-free white chrome paper. On the inside bottom is a rigid polyethylene foam liner to mount the pinned insects.
Entomology cabinet—51-5/8''H x 21-3/4''W x 22-3/4'' D or 84''H x 23''W x 20-7/16'' D steel cabinets with a gasket and locking door.
Aluminum Cornell type entomology drawers
NPS entomology specimen labels

For insects preserved in fluids, see Wet Collections below.

Plant Specimens

Herbarium specimens should be glued, taped or sewn (or a combination approach) onto the mounting sheets as appropriate for the specimen to ensure that they are adequately mounted.

Herbarium mounting sheets—an 11.5’’W x 16.5’’L sheet of white, acid-free and buffered paper stock.
Herbarium adhesive—a polyvinylacetate (PVA) glue.
Herbarium mounting tape—a white cloth tape with water-activated adhesive.
Herbarium folder—a folder measuring 16-5/8’’ L x 12’’ W (when folded), made of acid-free and buffered heavy-stock paper.
Herbarium fragment folder—an acid-free and buffered paper enclosure.
Herbarium cabinet—40’’H x 29-1/8’’W x 19-1/8’’D or 84-1/8’’H x 29-18’’W x 19-1/8’’ D steel single-door cabinet with gasket and locking door.
NPS herbarium specimen labels

For plants preserved in fluids, see Wet Collections below.

Mammal Collections

Specimen trays—made from buffered, acid-free board.

- Contact with buffered paper can damage pigments in bird and mammal specimens. Line buffered trays with polyethylene sheeting to block direct migration of alkalis to these specimens.

Wet Collections

Evaporation of preservatives from fluid specimens endangers specimen preservation, increases collection management responsibilities, creates an increased fire hazard in museum storage and threatens the health and safety of curatorial staff. To ensure that all park specimens are appropriately preserved without creating future management problems, **all wet specimens must be submitted in approved containers with approved closures**, as listed below.

- Containers must be screw-top, clear flint glass jars with polyethylene insert and a flexible
polypropylene lid. Wide-mouthed jars are preferred.
- Containers should be filled to the neck with the preservative fluid. This reduces the airto-fluid ratio in the container and allows for immediate detection of evaporative loss of fluid because all containers are filled to a standard height.
- Specimens should not be allowed to protrude above the level of the fluid in the container. Use the largest jar size necessary to ensure that this does not occur.

Jars should be appropriately sized to the specimens they contain. Multiple specimens of the *same species* may be stored within one jar if:

- Each specimen is individually tagged with the park catalog number.
- Tags, ink and string are chemically resistant.
- An inventory of the specimens is included in each jar.

The fluid preservative used is necessitated by the specimens collected. In general, 70% ethanol (ethyl alcohol) is the preferred preservative. However, 10% buffered formalin is currently the preservative of choice for eggs and larvae of fishes and amphibians. Formalin is also commonly used as a fixative for many types of specimens. **In all cases, the chemicals used for fixation and storage must be documented for each specimen**. It is important to record all fixation and

preservation chemicals, processes and exposure times because these may affect future use of the specimen, especially for molecular studies.

General information about fluid preservatives is presented below. Additional questions should be addressed to the Curator/Cultural Resource Specialist's office.

- Alcohol should be diluted with distilled, purified or deionized water to avoid the formation of precipitates.
- Formaldehyde is not considered a good long-term preservative for most specimens. In addition, it represents significant health and safety issues for collectors, researchers and staff. Use of formaldehyde or formalin should be limited only to those situations when it is required for the preservation of the specimen and ethanol is inappropriate.
- Isopropanol is used as a preservative at concentrations of 45-50%. At this strength it has been shown to cause considerable shrinkage of specimens. Use of isopropanol as a fluid preservative must be justified and approved by the Curator/Cultural Resource Specialist's office in advance.
- For fish, it has been recommended that specimens fixed at 10% formalin be transferred to 35%, then to 55% and then to the 70% concentration of ethanol storage solution.
- Methanol is not a good preservative and must not be used.
- Phenols are not good long-term (i.e. greater than 10 years) preservatives and must not be used.
- There are no published reports on the long-term effectiveness of ethylene glycol as either a preservative or an additive and it must not be used.
- Fungal activity is a problem with glycerol solutions and they must not be used.
- **It is the responsibility of the collector to know the hazards associated with fluid preservatives and to ensure safe handling procedures during preparation and transportation of specimens**.

A list of vendors for Curatorial products is available upon request from the Curator/CR Specialist's office.

Before You Collect at Rock Creek Park

If you are issued a research permit that allows collecting ROCR, your signature on the permit indicates that you agree to comply with the National Park Service's policies as well as park- and project-specific conditions of the permit established by ROCR. One of the Service-wide stipulations for researchers is that standard protocols be followed about any collections you may make as part of your study. This document outlines what it takes to comply with NPS regulations related to collections and the curation of any specimens. If you collect specimens that are not destroyed in analysis, regardless of where they are kept, they are the property of the National Park Service, and thus subject to these regulations.

CHECKLIST for the Researcher related to collecting specimens

Before your research begins as part of your application:

☐Describe in your application and study plan the kind of collections you would like to make

(be specific about size or number of specimens to be collected)

□Arrange for short- or long-term loan to another institution (if specimens will not be destroyed during analysis, and you want these specimens to reside in a place other than ROCR)

□Contact the other institution and discuss the loan with that institution's museum curator or person in a similar role

□Print a copy of your NPS research application (at the bottom is a signature line that needs to be signed by the curator of the institution agreeing to the curatorial responsibility while the specimens are on loan)

□Return the signed copy to the Research Administrator at ROCR (Bill Yeaman).

When you are collecting (if issued a permit):

□Record the following information about the specimens you collect, in addition to any other information you may wish to document.

- o Accession number
- o Catalog number
- o Classification
- o Collector
- o Collection Date
- o Collection Method (Shovel, hand, etc)
- o Collection Number
- o Collection Site
- o Condition
- o Description
- o Formation (for geology)
- o Identified By and Date
- o Period/System (geology & paleontology)
- o Preservation and/or preparation
- o Quantity or item count
- o Specimen name (scientific and common)
- o T/R/S **or** UTM **or** Lat./Long. **or** GPS
- o Type (if designated)

When you are finished collecting before you leave Rock Creek Park:

□Obtain an accession number for your collection from the ROCR staff (Simone Moffett; see contact information below). This accession number must eventually appear on all reports, field notes, and correspondence related to your collection, and on the label of each specimen collected. ***Specimens may not leave the park until they are accessioned and the ROCR staff record the accession number. Please plan sufficient time to complete this step! If you cannot, for some reason, please call the ROCR Curator/ CR Specialist at 202-895-6011, to discuss another acceptable arrangement for getting accession numbers.***

□Report the number (or approximate number of specimens) that were collected at ROCR to the park's Curator/CR Specialist. Museum staff will assign you a block of catalog numbers (one number for each specimen that will be permanently retained).

□Obtain an NPS Outgoing Loan Agreement form, to be signed by the individual responsible for the loan. (All specimens, as well as their derivatives and byproducts, remain the property of the United States). NPS policy requires that long-term loans be renewed every 10 years.

□Obtain from ROCR's Museum Program staff

- Cataloging instructions (including the list of required fields and the proper

format)
• Blank and sample worksheets (if needed)
• An Excel spreadsheet to allow entry of data and to generate NPS specimen labels, along with instructions for completing the labels.

Information about specimen labels:

• Other software can be used such as ‘‘Excel’’ or ‘‘Filemaker Pro.’’ From these databases information can be easily transferred into ANCS+.

• Labels should be printed on archival quality (acid-free) paper or Tyvek using permanent ink. All labels **must** contain ROCR accession and catalog numbers in permanent ink, in the following format:

ROCR-XXXX [for the accession number—please note the hyphen]
ROCR XXXXX [for the catalog number]

• **The hyphen placement is necessary to distinguish the accession number from the catalog number.**

Soon after leaving Rock Creek Park:

□Call in your specimen count to the Park Museum Program staff (if you did not know this when you left the park), so you can get your catalog numbers over the phone. When you call, please have the following information ready:

• your permit number and accession number
• dates collecting began and ended
• number of specimens collected (estimates are acceptable for large collections)
• the name of the repository/institution in which the specimens will be housed, and the name and title of the individual who will be responsible for the specimens

As soon as practical:

□Submit any specimens that are to be permanently retained by ROCR, along with your labels and associated documentation, to the repository in which they are to be stored. **Specimens that are not to be consumed in the course of research need not be cataloged.**

Within one year of the final date of collecting (or an agreed upon timeframe):

□Send copies of all of project field records (notes, maps, recordings, etc.) to ROCR at the address below. Please copy notes, maps and other written or printed matter onto acid-free paper. This requirement is a safeguard, in case original materials are accidentally destroyed or lost in the future.

□Submit at least one of the following to ROCR:

• Completed NPS cataloging worksheets and/or an electronic copy of your MS Excel spreadsheet for uploading to ANCS+ database.
• A printout of your institution's catalog records, including fields showing ROCR accession and catalog numbers; and the institution’s catalog or tracking number.

If you find that you will have trouble meeting these deadlines, call or write the Museum staff at the address below to make other arrangements.

Please feel free to contact Rock Creek Park staff at any time in this process with any questions. We are here to help you comply with the terms of your permit and make compliance as easy as possible, under current regulations.

Simone Monteleone Moffett
Cultural Resources Specialist
Rock Creek Park
3545 Williamsburg Lane, N.W.
Washington, DC 20008-1207
202-895-6011

The Research Permit Coordinator can answer any questions pertaining to the specific permit process, application, and requirements.

Bill Yeaman
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Rock Creek Park
3545 Williamsburg Lane, N.W.
Washington, DC 20008-1207
202-895-6074

Cataloging NPS Biological Specimens

Contract catalogers or others who collect and document natural history specimens at Rock Creek Park (ROCR) need to prepare data files that can be imported into the Automated National Cataloging System (ANCS+), the museum collection management system for the National Park Service. If you are cataloging biology specimens for National Park Service collections, this document will help you.

Formatting Your Data File

• Start with an export template created from MS Excel, provided by ROCR staff. This template includes all mandatory data fields and was emailed to you with your museum accession number. If you need another copy of this database template, please contact the ROCR Museum Curator/CR Specialist.

• If you have data that requires additional fields, contact the Museum Curator to discuss additional needs and a new export template will be emailed to you. Do not add your own fields without discussing it with the Museum Curator.

• The export file is a delimited text file (NHEXPORT.txt)which is available as an Excel worksheet (NHEXPORT.xls). If you have already created databases in Excel or Access, you will likely have to modify them to allow a successful import of the data into ANCS+.

• The Catalog number must be the first column in your file. Catalog number is the unique key that ANCS+ uses to match up existing records with the incoming data, so that records can be updated as well as added to the database.

• The column headers in your file must match the fields selected in the ANCS+ Import/Export template. The easiest way to accomplish this is to start with a template exported from ANCS+.

• The columns must be in the same order in your file as they are in the ANCS+ Import/Export template. Your file must not contain extra columns. It should also not be missing any columns (fields) that are included in the ANCS+ Import/Export template. Otherwise the import process will not be able to match the fields.

Cataloging with the Export Format

The table below provides information on the mandatory fields and the data and format that must be included in each field for the catalog record to be considered complete.

Note: Some fields in ANCS+ require special formatting, including the addition of spaces, underscores or hyphens. When entering data in ANCS+, the program controls the data format in these fields. This control isn't available in MS Excel or MS Access, so the cataloger must enter these manually. Failure to use the proper formatting can cause the import to fail.

Mandatory Fields ANCS+ Field Name (NPSpecies Field Name)	**Description & Format Requirements**
Catalog # (Specimen ID)	Enter the complete catalog number from the list of numbers provided by the ROCR staff for your use. Format: ROCR9999999. A standard NPS catalog number includes a 4-letter park acronym, plus a ***unique*** number of up to 7 digits, spaced so the last digit is always in the 12th character space. Examples:''ROCR 1234567'' or ''ROCR 1''.
Accession # (No NPSpecies equivalent)	Enter the complete accession number provided by CHOH staff for your use. **Note**: Accession numbers indicate groups of records, so are not unique for each catalog record. Format: ROCR-99999. A standard NPS accession number includes a 4-letter park acronym, a hyphen, plus a number of up to 5 digits, padded with zeros and spaced so the last digit is in the 10th character space. Examples: ''ROCR-12345''
NPS Class 1 (No NPSpecies Equivalent)	Enter ''BIOLOGY'' More information – check the Museum Handbook appendix H for Natural History classifications
NPS Class 2 (Kingdom)	Enter the Kingdom (Plantae, Animalia, Monera, Protista or Fungi).
NPS Class 3 (No NPSpecies Equivalent)	Enter the Major Group, a broad taxonomic category taken from the NPS Hierarchical Classification Outline (HCO) to represent a subcategory of the 6 Kingdoms. Examples: Bryophyta, Monocotlyledoneae, Dicotyledoneae, Mammalia, Reptilia, Aves, Insecta, etc.

	Refer to NPS Museum Handbook Part II, Appendix H: Natural History and the Hierarchical Classification Outline (HCO).
NPS Class 4 (Order or Family)	Enter the Filing Group. For plants, enter the Family name. For insects, enter the Order. For mammals, enter the Family or Subfamily name. For birds, enter the Family or Subfamily name. For fish, enter the Family name. Examples: Asteraceae, Poaceae, Lepidoptera, Passeridae Refer to NPS Museum Handbook Part II, Appendix H: Natural History and the Hierarchical Classification Outline (HCO).
Obj/Science (Standard Scientific Name)	Enter the scientific name of the specimen. Contain a set of subfields such as Genus, Species, Subspecies, etc. Use a space-underscore-underscore delimiter to separate each subfield. Example: ‘‘Genus name __Species Modifier __Species name’’. <u>Do Not create separate columns in your table for each subfield</u>. There are fifteen subfields available for use. In order, they are: Genus name Species Modifier Species Name Species Authority Species Year Subspecies Subspecies Authority Subspecies Year Variety Variety Authority Variety Year Forma Forma Authority Forma Year Descriptive Name Make entries as appropriate. Refer to the ANCS+ User Manual, Chapter 2, Section V.
Common Name (Standard Common Names)	Enter the common name of the specimen if known.
TSN (TSN)	Taxonomic Serial Number linked to ITIS
Item Count (No NPSpecies Equivalent)	Item Count if individual specimens. <u>Note</u>: If entering data in the Item Count field, leave the Quantity field blank.
Quantity (No NPSpecies Equivalent)	Enter quantity if bags, boxes, etc. <u>Note</u>: If entering data in the Quantity field, leave the Item Count field blank.
Storage Unit	Enter ‘‘EA’’ for individual specimens.

(No NPSpecies Equivalent)	
Description* (No NPSpecies Equivalent)	Enter a description of the specimen. The description should provide enough information to identify the specimen from others. Do not use unauthorized abbreviations or codes. For plants, include information such as presence of roots, flowers, seeds, etc.
Dimens/Weight*	Enter the dimensions and/or weight of the specimen, if possible. Use metric measurements. Examples: ‘‘H 15.0, W 8.9, L 5.6 cm’’, ‘‘H 10.3, W 6.8, D 4.5 cm’’ or ‘‘0.05 g’’ See the Museum Handbook, Part II, Appendix C, for instructions on additional standardized formats for recording measurements.
Age*	Enter the age of the specimen at time of death, as appropriate.
Sex*	Enter the sex of the specimen. Choose from the following: ‘‘Fetal’’ ‘‘Female’’ ‘‘Juvenile’’ ‘‘Male’’ ‘‘Unknown’’
Condition (No NPSpecies equivalent)	Condition of the specimen. Enter either ‘‘COM/GD’’ (for Complete/Good) or ‘‘COM/FR’’ (for Complete/Fair), which are usually acceptable for recently collected specimens. If you have a specimen that does not fit these condition descriptions, please contact ROCR staff.
Collector (Observer)	Enter the name of the collector, last name first. For example, ‘‘Doe, John’’ or ‘‘Smith, Tom’’ Note: If there is more than one collector, use a space-hyphen-hyphen delimiter to separate each subfield. For example, ‘‘Doe, John --Smith, Tom’’
Collection Date (Date)	Enter the date the specimen was collected, in the following format: MM/DD/YYYY
Collection # (Observer Number)	Enter the field collection number, if one exists.
Other Numbers	Record other numbers assigned to the specimen, such as temporary catalog numbers assigned by other institutions. If known, indicate a source for the other number. Record field collection numbers in the Collection Num field above.
Identified By (NPSpecies equivalent?)	Enter the full name of the person, last name first, who identified the specimen. Example: Jones, Sarah
Ident Date	Enter the date of identification, in the following format: MM/DD/YYYY
Locality (Location Description)	Concise description of collection site within the park
Park (Park Code)	Enter the 4-letter acronym for the appropriate park Examples: ROCR

County (County)	Enter the county from which the specimen was originally collected.
State (State)	Enter the state from which the specimen was originally collected. Use the two-letter US Postal Code.
Lat Long N/W (Latitude, Longitude)	Note: Either Latitude/Longitude or UTM Coordinates are required for every specimen. Enter both, if available. This field in ANCS+ contains a set of subfields for degrees, minutes and seconds of latitude and longitude, but all data can be entered in the template without the underscore delimiters and the data will import just fine. Do Not create separate columns in your table for latitude and longitude. Example: ‘‘38_30_15/118_22_30’’ would be the entry for 38 30' 15" N, 118 22' 30" E
UTM Z/E/N (UTM X, UTM Y, UTM Zone)	Note: Either Latitude/Longitude or UTM Coordinates are required for every specimen. Enter both, if available. Enter the UTM (Universal Transverse Mercator Grid) coordinates for the collection site. Do Not create separate columns in your table for each subfield You cannot enter characters. The field is formatted to accept 2 digits, a slash, 6 digits, a slash, and 7 digits as follows: a. UTM Zone = 2 numbers b. UTM X (Easting) = 6 numbers c. UTM Y (Northing) = 7 numbers Example: ‘‘05/291000/4264000’’ would be the entry for UTM zone 5, 291000E, 4264000N
Habitat (Habitat)	Enter specific information about the habitat or community type. Examples: ‘‘Subalpine fir/grouse whortleberry habitat type’’ or ‘‘Geyer will/beaked sedge riparian community type’’
Habitat/Comm (Habitat)	Enter information about the general habitat or community type. Examples: ‘‘marsh’’, ‘‘spruce/fir forest’’ or ‘‘grassland’’
Elevation* (Elevation and Elevation Units)	Enter the elevation where collection was made, if known. Enter elevation, in meters, for terrestrial collection sites. Do not convert English measurements. Example: 550 m.
Waterbody/Drain*	For aquatic and marine sites only, record the waterbody or drainage of the collection site. The field in ANCS+ will expand into two subfields: Waterbody and Drainage. Use a space-underscore-underscore delimiter to separate each subfield, if using both or before the name of the drainage, if only the latter is used. Examples: Waterbody: ‘‘Turner River’’ Drainage: ‘‘ __Florida Bay
Assoc Spec* (No NPSpecies	Enter other species that are found in the same environment or location, if documented.

equivalent?)	
Exotic/Native (more choices in NPSpecies)	Enter either ‘‘NATIVE’’ or ‘‘EXOTIC’’ "Native species" are defined as all species that have occurred or now occur as a result of natural processes on lands designated as units of the national park system. Native species in a place are evolving in concert with each other. "Exotic species" are those species that occupy or could occupy park lands directly or indirectly as the result of deliberate or accidental human activities.
Threat/Endang (different choices from NPSpecies)	Enter the federal status under the Endangered Species Act, if the specimen is a threatened or endangered species. Choose from the following options: ‘‘C’’ = Taxa for which the Service has on file sufficient information on biological vulnerability and threat(s) to support proposals to list them as endangered or threatened species. ‘‘E’’ = Endangered ‘‘PE’’ = Proposed Endangered ‘‘PT’’ = Proposed Threatened ‘‘T’’ = Threatened
Rare (No NPSpecies Equivalent?)	Document the presence of a taxa on any other list, besides the Federal T&E lists, denoting rarity in the area, such as regional, state, county, or park lists. Example: lists of species of special concern maintained by state heritage programs
Type Specimen (NPSpecies Equivalent?)	If appropriate, enter the type for the specimen, or "Voucher" if the specimen is a voucher specimen. This indicates that the specimen has been recognized in publication as a "type specimen". Example: Allotype, Holotype, Paratype, etc.
Location (Steward/Repository)	Enter the physical storage location of the specimen.
Cataloger (Entered Date)	Enter the full name of the cataloger, last name first. Example: ‘‘Doe, John’’ or ‘‘Smith, Thomas J.’’
Catalog Date (Entered Date)	Enter the date of cataloging, in the following format: MM/DD/YYYY

*Information for these fields may not be available for all specimens. If no data is available, leave the fields blank. Do not delete the columns from the template.

Common Errors

• The most frequent error is having column headers that don't match up, either due to typos or due to having extra columns in Excel or Access that don't have a match the ANCS+ Import/Export template. Do not change the column headings or order in the export template.

• Incorrect formatting of the Catalog number and/or Accession number fields. If the catalog number is incorrectly formatted, the imported records may not sort correctly. The most frequent formatting mistake for Catalog numbers is an incorrect number of spaces between the acronym and the number. The most common mistakes in Accession numbers are omitting the hyphen between the acronym and the number, and failing to pad the number with zeros.

Additional Information
You may download the pertinent chapters of the NPS ANCS+ User Manual by chapter at http://www.cr.nps.gov/museum/publications/ancs.html. We recommend:

Chapter 2: Cataloging a Biology Specimen, or
Chapter 2: Cataloging a Geology Specimen, or
Chapter 2: Cataloging a Paleontology Specimen

Each of these chapters describes the mandatory and optional data fields, with field-by-field descriptions, approved values, and formatting. The NPS Museum Handbook (Parts 1-III) is available on line at http://www.cr.nps.gov/museum/publications/MHII/mushbkII.html.

Submitting Specimen Catalog Records
1. After entering your data in MS Excel save the data in a comma separated value (.csv) or text (.txt) format. ANCS+ will import delimited text files (*.txt or *.csv files), but not Excel (*.xls) files.

2. Attach your saved data file to an email and send it to **simone_moffett@nps.gov** . Include your museum accession number in the subject line or email text. If you have unused catalog numbers, please include those numbers in your email as well.

If your incoming data file is formatted correctly, the data will import successfully, creating NPS museum catalog records in ANCS+. If your data is formatted incorrectly, it will be returned to you for corrections.